

REMARKS

As a result of the foregoing amendment, Claim 9 and 16 have been modified to recite that a molten amorphous plastic material is provided from a melt reactor as disclosed at page 5, wherein PET1 exits a melt reactor (not shown) and enters a cutter 2 at a temperature of approximately 280 °C while being cooled and solidified.

Reconsideration and withdrawal of the rejection of the claims as being anticipated by the '346 patent are requested. This reference is devoid of any disclosure of the specific sequence of process steps required by independent Claims 9 and 16. In particular, this reference does not disclose the absence of a heating step prior to crystallization and the plastic material being subjected to sieving after crystallization. Each of independent Claims 9 and 16 require these specific characteristics.

As a result of the sequence of process steps recited in the claims, the objects of the present invention are achieved: namely, a higher reactivity in the solid state polycondensation step (also known as the SSP step or post-condensing step or solid-stating step or recondensation step) which is the last step of the method recited in Claims 9 or 16 and which causes the formation of larger crystallites and improved surface crystal structure; the reliable separation of solid foreign substances from the plastic material after crystallization which may include the removal of oversized particles, in particular, the agglomerates of pellets of plastic material that may have been formed between the pelletizing step and the post-condensing step; lower power consumption and in particular, thermal power consumption, throughout the pelletizing, crystallizing and post-condensing steps.

Thus, the present invention starts out by using a plastic material already in a molten state. The present invention performs the crystallization which is preferably carried out at a temperature window between the glass transition temperature and the melting temperature

where the rates of either induced or spontaneous crystallite formation and/or crystallite growth are high enough to achieve significant crystallinity in a short time interval, for example, in the case of PET crystallization, a temperature between 140 and 180°C.

This temperature window may be approached from either the lower temperature side, i.e. from the glassy state, or the high temperature side, i.e. from the molten state, the latter case being used in the present invention. The cooling of the pellets from the molten state toward the crystallization temperature window can be controlled such that the rate of crystallite growth outperforms the rate of crystallite formation. This results in the overall number of crystallites within a pellet being smaller while the average size of each of the crystallites tends to be larger.

Avoiding the heating prior to crystallization reduces the amount of thermal energy required and the subjecting of the plastic material to sieving after crystallization prevents agglomerates from entering the post-condensing step.

The '346 patent simply does not disclose or even remotely suggest such steps for such advantages as a result of these steps. Accordingly, the reference does not anticipate the present invention as claimed and this rejection should be withdrawn.

Reconsideration and withdrawal of the rejection of Claims 9-12 as being unpatentable under 35 U.S.C. §103 over the combination of the '721 patent in view of the '969 patent, DE '357 or '322 patent. Most certainly, the '721 patent does not disclose the two recited and necessary steps set forth in the claims as amended. There is nothing in the secondary references which in any way suggest that such steps should be included in the process disclosed in the '721 patent. Most certainly, none of these references disclose the required sieving step of the present invention. Accordingly, the rejection on this combination of references must also fail and this rejection should be withdrawn.

In view of the foregoing it is submitted that this application is now in condition for allowance and favorable reconsideration and prompt Notice of Allowance are earnestly solicited.

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Respectfully submitted,



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